BY ORDER OF THE COMMANDER
AIR MOBILITY COMMAND

AMCI 24-101V7 CL-1

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Transportation

C-141 PHASE II LOADING SUPERVISOR'S CHECKLIST

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This checklist complements AMCI 24-101V7, *AMC Aerial Port Phase II Aircraft Loading Program*, and is formatted so that it may be trimmed down to fit aircrew style checklist binders

This checklist supercedes AMCI 24-101V7, CL-1 11 February 2000.

Items preceded by (▸) indicate a change from the previous edition.

C-141 PHASE II CHECKLIST

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1. GENERAL INFORMATION

1.1. Items in this checklist are excerpt from the relevant portions of the basic aircraft flight manuals/loading instructions (TO 1C- C141B-1 and TO 1C 141B-9) and are used by the Phase II loading supervisors. If conflict arises between this checklist and the T.O. checklist, the T.O. checklist will always take precedence.

1.2. Warnings, Cautions, and Notes. The following definitions apply WARNINGS, CAUTIONS, and NOTES found in the checklist.

WARNING

1.2.1. Operating procedures, techniques, etc., which could result in personal injury or loss of life if not carefully followed.

CAUTION

1.2.2. Operating procedures, techniques, etc., which could result in damage to equipment if not carefully followed.

NOTE

1.2.3. An operating procedure, technique, etc., which is considered essential to emphasize.

2. LOAD PLANNING CHECKLIST

2.1. Load Plan - CHECKED

2.1.1. Zero Fuel CG - CHECKED

2.1.2. Load Sequence - CHECKED

Select desired center of gravity location for total cargo load. Also, compare center of gravity of total cargo load with desired center of gravity location on aircraft.

2.1.3. Hazardous Material and Special Handling - CHECKED

2.1.3.1. Determine the placement of hazardous materials for accessibility, visual inspection, and jettisoning.

2.1.3.1.1. Size, Weight, Location - CHECKED

2.1.3.1.2. Compatibility and Separation Requirements - CHECKED

2.1.4. Refrigerated Material-CHECKED

2.1.5. Cargo Size Limitations - CHECKED

2.1.6. Roller Load Limits - CHECKED

Calculate roller loads and check against roller load limitations.

2.1.7. Floor Load Limits-CHECKED

Calculate floor loads and check against floor load limitations

2.1.8. Final Load Configuration - DETERMINED

Position cargo units according to tentative plan, and determine final load configuration.

3. GENERAL INSTRUCTIONS: CARGO LOADING PREPARATION

3.1. General Instructions

3.1.1. Inspect the load to ensure proper pallet buildup; such as damaged pallets or tiedown equipment; sufficient tiedown to meet restraint criteria; compliance with safety aisle requirement; pallets are with limitations, etc.

▸ 3.1.2. Ensure pallets contain two properly completed AF Forms 2279, Pallet Identifier. When there is any questions concerning the weight of a pallet reweigh the pallet.

▸ 3.1.3. Ensure proper preparation of pallet train(s). Use restraint barriers, when applicable; CG marked; couplers properly in place; chain gates properly installed.

3.1.4. Inspect hazardous cargo shipments for evidence of damage, leakage, corrosion, or loose closure; proper sequencing for aircraft on/off loading at en route and destination stations, as well as being readily available for jettisoning.

NOTE
Hazardous cargo that is considered jettisonable shall not be positioned forward of non-jettisonable cargo, except when its size, weight, and location will permit jettisoning by hand. Depending upon the amount of hazardous cargo, placement aboard the aircraft should normally be planned for the aft section of the cargo compartment. Hazardous cargo will never be loaded in such a manner that would make jettisoning impossible

3.1.5. Ensure the documentation for signature service cargo is in order. Take appropriate security measures to safeguard cargo, and ensure the cargo is easily accessible for loadmaster verification.

3.1.6. Ensure the proper amount of shoring is available for use during loading.

3.1.7. Ensure pneumatic tires are properly inflated.

3.1.8. Ensure personnel count the tiedown equipment used on the load, and retrieve a like amount (One for one, when available) from the aircraft.

3.1.9. Ensure standing water/snow is removed from pallets.

3.1.10. Properly sequence and secure the load aboard the MHE.

3.2. Cargo Loading Preparation

3.2.1. Cargo Unit Dimension -CHECKED

3.2.2. Weight of Cargo Units - CHECKED

3.2.3. CG Location of Cargo Units - DETERMINED

3.2.4. Roller Load Limits - CHECKED

3.2.5. Floor Load Limits - CHECKED

3.2.6. Shoring Requirements - DETERMINED

3.2.7. Dimensions, Weights, and CG Locations of Cargo Units - MARKED

3.2.8. Pallet Train Couplers, Restraint Application, Security of Loose Ends of Netting, and CG Location/ Marking Conditions of Pallets - CHECKED

3.2.9. Hazardous Materials - CHECKED

3.2.10. Load On MHE - SECURED

3.2.11. Soil Contamination and Pest Infestation - CHECKED

3.2.12. Mounted Cargo - SECURED TO CARRIER

4. AIRCRAFT PREFLIGHT: EXTERIOR

4.1. Aircraft Tail Number / Parking Spot - CHECKED

NOTE
Received concurrent servicing supervisor's (CSS) briefing if applicable.

4.2. Aircraft Electrically Grounded - CHECKED
(Will be grounded front and rear)

4.3. Main Gear Wheel Chocks - IN PLACE

Check main gear wheel chocks forward and aft; chocks should be two inches from wheels.

4.4. Stabilizer Struts - EXTENDED/CHECKED

CAUTION
Improperly serviced cargo loading stabilizer struts may retract under load. If any indication of fluid leakage is noted on the struts, they should be serviced in accordance with instructions in TO 1C-141B-2-2JG-5 prior to loading or offloading cargo.

CAUTION
After lowering the stabilizer strut and footpad fails to touch the ground, use temporary shoring (shoring must encompass the entire pad area) under the strut footpad until enough cargo is loaded to settle the aircraft into the normal operating height.

NOTE
The stabilizer strut shall be extended during all cargo loading and offloading operations from aircraft ramp. Rotate the strut foot 90 degrees from stowed position before placing on ground.

4.5. Exterior Inspection-COMPLETED

5. AIRCRAFT PREFLIGHT: INTERIOR

5.1. FLIGHT DECK

5.1.1. AFTO 781 A&K - CHECKED

Check for discrepancies that will affect loading/offloading

5.2. CARGO COMPARTMENT

5.2.1. Troop Door - AS REQUIRED

5.2.2. Cargo Compartment Lights - AS REQUIRED

5.2.3. Ramp Loading Lights - AS REQUIRED

5.2.4. Personnel Warning Lights Removed -

5.2.5. Cargo Floor Obstruction / Excess Tiedown - STOWED

5.2.6. Auxiliary Loading Ramps - STOWED

5.2.7. One-for-One Tiedown - EXCHANGED

5.2.8. Cargo Doors and Ramp - FULLY OPENED

5.2.9. Interior Inspection - COMPLETED

6. AIRCRAFT PREPARATION: PALLETIZED CARGO LOADING

6.1. Roller Conveyors Up and Locked - AS REQUIRED

6.2. Restraint Rails - AS REQUIRED

Restraint rail fittings must fully engage in locked position

6.3. Restraint Rail End Bumpers - INSTALLED

Whenever number one rail section is down

6.4. Restraint Rail Detents - RETRACTED

Check locking mechanisms for freedom of movement. Check rail face for obstructions. Ensure detent prawls do not extend into face of rail

CAUTION
Do not step on mechanism. Individual mechanism controls will be operated by hand only. If the detent or detent pawl of the right rail mechanism protrudes inboard of the rail face, locking mechanisms will be damaged during loading. Detent will not be used to prevent over-travel pallets or platforms.

6.5. Retractable Lips - RETRACTED

6.6. Hinged Walkways - AS REQUIRED
EXTENDED AND PINNED

6.7. Tiedown and Floor Fittings - POSITIONED (As Needed)

6.8. Aircraft Preparation for Palletized/ Floor Load Cargo - COMPLETED

7. AIRCRAFT PREPARATION FOR FLOOR CARGO LOADING

7.1. Restraint Rails - UP AND SECURED

7.2. Roller Conveyors - DOWN AND LOCKED

7.3. Tiedown and Floor Fittings - POSITIONED

7.4. Door and Hatches - AS REQUIRED

WARNING
Sufficient doors and hatches will be opened to provide adequate ventilation for dispersal of fumes when loading self propelled vehicles.

7.5. Loading Crew Duties - BRIEFED

7.6. Guides to Observe Critical Clearances - ASSIGNED

7.7. Vehicle Driver - BRIEFED

7.8. Wheel Chocks(s) - POSITIONED

7.9. Vehicle - POSITIONED/ADJUSTED

CAUTION
Care will be taken to prevent vehicle from striking aircraft.

7.10. Brake – SET

7.11. Load Cargo - COMPLETED

8. CARGO LOADING: PALLETIZED CARGO

8.1. Loading Crew Duties - BRIEFED

Brief loading crew members on duties to be accomplished and hand signals to be used. Caution them to avoid excessive speed when rolling pallets into the aircraft. Personnel will maintain positive control of pallet movement at all times.

8.2. Guides To Observe Critical Clearance - ASSIGNED

8.3. Vehicle Driver / Spotters - BRIEFED

Caution driver to follow signals of guides for vehicle clearance judgment.

8.4. Wheel Chocks - POSITIONED

8.5. Vehicle - POSITIONED/ADJUSTED

CAUTION
Care will be taken to prevent vehicle from striking aircraft.

8.6. Brakes - SET

Driver Will Remain at Vehicle Controls.

8.7. Move Pallet onto Aircraft, Place in Desired Position - COMPLETED

WARNING
When rolling pallets into or out of the aircraft, avoid excessive speed.

If all the rail locks can be engaged into the pallet, they will be engaged. However, a minimum of two rail locks shall always be operative and engaged for restraint of palletized cargo (One left and one right). Supplemental tiedown may be required.

CAUTION
Locks shall not be used as pallet stops.

Ensure there is adequate restraint on palletized cargo to keep it from shifting or falling when moving pallets into and out of the aircraft.

NOTE
Ensure pallets side rings are in the up position to prevent binding in the restraint rails.

NOTE
Configuration may result where the pallet is not fully encompassed by the restraint rails. This is authorized provided the following restrictions are adhered to: At least two rail locks (One left and one right) shall be engaged for restraint. Additional restraint (Forward, aft, lateral, and vertical) may be required utilizing supplemental tiedown.

Ensure pallet side rings are in the up position to prevent binding in the restraint rails.

8.8. Rail Locks and Retractable Lips - ENGAGED

NOTE
When pallet(s) cannot be locked, ensure minimum restraint criteria are adhered to. Supplemental tiedown may be required.

8.9. Repeat Steps 7 and 8 for Remaining Pallets

8.10. Cargo Loading Checklist - COMPLETED

9. CARGO LOADING: FLOOR

9.1. Loading Crew Duties - BRIEFED

Brief load crew on duties to be accomplished and hand signals to be used. Caution them to avoid excessive speed when rolling pallets into the aircraft. Personnel will maintain positive control of pallet movement at all times

9.2. Guides To Observe Critical Clearance - ASSIGNED

9.3. Vehicle Driver - BRIEFED

Caution driver to follow signals of guides for vehicle clearance judgment.

9.4. Wheel Chock - POSITIONED

Position chocks(s) to prevent vehicle from striking aircraft.

9.5. Vehicle - POSITIONED/ADJUSTED

Direct or have vehicle directed into position. Adjust level of vehicle rollers to the same level as aircraft ramp.

9.6. Brakes - SET

9.7. Load Cargo - COMPLETED

10. VEHICLE PREPARATION

10.1. Vehicle Dimensions - CHECKED

Determine vehicle dimension; if they appear critical, check vehicular size limit charts or cargo profile.

10.2. Engine and Brakes - CHECKED

Check vehicle engines and breaks for proper operations.

10.3. Cargo Load on Vehicle - CHECKED

Ensure that all cargo, loose accessories, and equipment are secure on or in the vehicle and have required restraint.

10.4. Fuel Tanks - VERIFIED

10.4.1. Vehicle and self-propelled units may be transported with fuel in tank not to exceed ½ tank capacity when placed on the cargo floor (3/4 for Chapter 3 operations) and ½ tank on the cargo ramp.

10.4.2. Wheeled engine powered support equipment must be completely drained of fuel (Purging is not required). Up to 17 ounces of fuel may be left in engine components and fuel lines provided all lines and fuel tanks are securely closed to prevent leakage of fuel. Must not exceed ½ tank for Chapter 3.

10.4.3. Position units loaded on the aircraft ramp with fuel tank openings located on the high side of the ramp.

10.4.4. Equipment mounted on a single axle disconnected from its prime mover and loaded with its tongue resting on the floor or ramp must be drained but not need be purged.

10.4.5. Units which are susceptible to fuel spills or leakage will be drained from movement.

10.5. Tanker Type Vehicles - CHECKED

Presently, there are no tanker-type vehicles, either trailer or self-contained, certified for airlift with fuel or water in tank.

EXCEPTION: The M-149A2 water trailer has been certified for airlift containing water; however, the M-149A2 trailer shall not be routinely airlifted with water in tank on normal channel missions.

10.6. Filler Caps/Battery - CHECKED/SECURED

10.7. Vehicle Weight and Weight of Cargo Loaded on Vehicle - CHECKED

Check vehicle weights (with cargo, if any) and determine wheel loads and axle loads. Check for weight and CG marked on side of vehicle.

10.8. Shoring Requirements - DETERMINED

10.9. Soil Contamination/Pests - CHECKED

11. VEHICLE LOADING

11.1. Concurrent Operations - COORDINATED/BRIEFED (As Required)

11.2. Airplane Configuration - CHECKED

11.2.1. Doors and Ramps - CONFIGURED (As Required)

11.2.2. Loading Aids - POSITIONED (As Required)

11.2.3. Ventilation - CHECKED

11.3. Vehicle Driver - BRIEFED

11.3.1. Hand Signals - BRIEFED

11.3.2. Transmission - LOW GEAR/LOWEST RANGE/ALL WHEEL DRIVE (As Applicable)

11.4. Engines and Brakes - CHECKED

11.5. Critical Clearance Observer - BRIEFED/POSITIONED

11.6. Shoring - POSITIONED (As Required)

11.7. Vehicle - LOADED

11.7.1. Load Plan - CHECKED

11.7.2. Brakes/Transmission - SET

11.7.3. Ignition - OFF

11.7.4. Driver - RELEASED

11.8. Restraint - COMPUTED / APPLIED

12. TIEDOWN

12.1. Types and Number of Tiedown Devices Required for Restraint Criteria - COMPUTED

12.2. Installation of Tiedown Devices - SUPERVISED

12.3. Tiedown Fitting/Device Installation - CHECKED

12.4. Loose Equipment-STOWED

13. AFTER LOADING CHECKLIST

13.1. Cargo (Load Sequence and Condition of Cargo) - RECHECKED

13.2. Load Restraint - RECHECKED

For Adequacy and Proper Application

13.3. Loading Aids - STOWED (If Used)

13.4. Auxiliary Loading Ramps-STOWED AND SECURED

13.5. Loose Equipment (Tiedown) - STOWED

One-for-One Exchange Accomplished

NOTE
K-Loader chocks will not be picked up until the K-loader is at least 10 feet from aircraft.

14. CARGO/VEHICLE OFFLOADING

14.1. Aircraft Preparation - CHECKED

NOTE
Offloading procedures for all type loads are essentially the reverse of onloading procedures. Perform applicable portions of this checklist for type of cargo to be offloaded.

14.2. Offloading Equipment - POSITIONED

14.3. Ventilation - AS REQUIRED

14.4. Tiedown/Forward Support Leg/Wheel - REMOVED/SECURED

CAUTION
Ensure there is adequate restraint on palletized cargo to keep it from shifting or falling when moving pallets into and out/off the aircraft.

14.5. Vehicle driver - BRIEFED

14.5.1. Hand Signals - BRIEFED

14.5.2. Transmission - LOW GEAR

14.6. Vehicle Air Pressure and Brakes - CHECKED

14.7. Floor Obstruction - REMOVED

14.8. All Loose/Excess Equipment - STOWED

14.9. Cargo - OFFLOADED

15. EMERGENCY PROCEDURES

15.1. Should a fire occur in any cargo item during the load/offload operation and the ground power unit is monitored by someone other than the loadmaster, airfreight personnel/loadmaster will proceed with the following instructions:

15.2. Notify the loading crew of the danger and direct the evacuation of the aircraft.

15.3. Remove the burning item from the aircraft if accessible, removable or practical.

15.4. Notify the Fire Department by best means available.

15.5. Attempt to extinguish fire utilizing the aircraft's portable extinguishers or other available fire fighting equipment.

15.6. Shut down all operating aircraft systems.

OTHER USEFUL INFORMATION

PALLET CENTROID	FWD OF PALLET
1 - 381*	1 - 337
2 - 471	2 - 427
3 - 561	3 - 517
4 - 651	4 - 607
5 - 741	5 - 697
6 - 831	6 - 787
7 - 921	7 - 877
8 - 1011	8 - 967
9 - 1101	9 - 1057
10 - 1191	10 - 1147
11 - 1281	11 - 1237
12 - 1371	12 - 1327
13 - 1472	13 - 1438

***PALLET POSITION 1 MUST START 10 INCHES AFT OF PALLET RESTRAINT RAIL END BUMPER.**

CG IN INCHES X GW
---------- = LSD
LSW

FORMULAS REQUIRED / = DIVIDE

SQUARE / RECTANGLE
WT / (L X W)=PSI

DRUMS WITHOUT RIM
WT / (.785 X DIAMETER SQUARED)

DRUMS WITH RIM
WT / (OD + ID X DIFFERENCE X .785)

SKIDDED
WT / (L OF S X W OF S X # OF S) =PSI

PERCENT OF MAC
ZFM LEMAC / MAC
------ =CGS - 858.9 / 265.7 X 100 = ZFW

MAXIMUM AXLE AND WHEEL WEIGHTS FOR VEHICLE WITH PNEUMATIC TIRES/FLIGHT

TREADWAYS | BETWEEN
OUTBOARD |TREADWAYS
|
MAX | MAX

Axle	Wheel	Axle	Wheel	Comp	Sta
10,000	5,000	5,000	1,250	D	322-678
20,000	5,000	4,400	1,100	I-M	678-998
10,000	5,000	3,700	925	N-R	998-1412
7,500	5,000	7,500	5,000	S-T	1412-1543

MAX LIMITS CAN BE INCREASED BY USE OF SHORING AS SPECIFIED IN TO 1-C-141B-9. STATION 292-322 NO CARGO IS TO BE LOADED IN THIS AREA.